DEPARTMENT of ENVIRONMENTAL SERVICES Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: ROCKY POND	Lake Area (ha):	29.95
Town: GILMANTON	Maximum depth (m):	12.2
County: Belknap	Mean depth (m):	4.5
River Basin: Merrimack	Volume (m^3) : 15	501000
Latitude: 43°24'04" N	Relative depth:	1.9
Longitude: 71°27'16" W	Shore configuration:	1.27
Elevation (ft): 520	Areal water load (m/yr):	15.03
Shore length (m): 2600	Flushing rate (yr ⁻¹):	3.30
Watershed area (ha): 1162.3	P retention coeff.:	0.50
<pre>% watershed ponded: 0.0</pre>	Lake type: na	atural

BIOLOGICAL:	5 February 2003	27 June 2002
DOM. PHYTOPLANKTON (% TOTAL) #1	ASTERIONELLA 80%	MALLOMONAS 90%
#2		ASTERIONELLA 5%
#3	(ALL ALGAE SPARSE)	CHRYSOSPHAERELLA 3%
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		
DOM. ZOOPLANKTON (% TOTAL) #1	NAUPLIUS LARVA 38%	NAUPLIUS LARVA 25%
#2		KERATELLA 21%
#3	(ZOOPLANKTON SPARSE)	KELLICOTTIA 17%
ROTIFERS/LITER	7	79
MICROCRUSTACEA/LITER	15	57
ZOOPLANKTON ABUNDANCE (#/L)	24	143
VASCULAR PLANT ABUNDANCE		Common
SECCHI DISK TRANSPARENCY (m)		3.8
BOTTOM DISSOLVED OXYGEN (mg/L)	5.0	0.0
BACTERIA (E. coli, #/100 ml) #1		3
#2		3
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 3.2 Hypolimnion volume (m^3) : 364500 Anoxic volume (m^3) : 16500

HEMICAL:	Lake: ROCKY POND Town: GILMANTON				
	5 February 2003		27 June 2002		
DEPTH (m)	3.5	7.0	2.0	5.0	9.0
pH (units)	6.2	6.1	6.3	6.1	5.9
A.N.C. (Alkalinity)	5.8	5.9	4.7	5.0	5.7
NITRATE NITROGEN	0.06	0.07	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	< 0.25	< 0.25	0.30	< 0.25	0.30
TOTAL PHOSPHORUS	0.006	0.007	0.010	0.009	0.021
CONDUCTIVITY (µmhos/cm)	129.5	134.2	96.0	108.4	117.0
APPARENT COLOR (cpu)	33	33	35	32	55
MAGNESIUM			1.19		
CALCIUM			3.8		
SODIUM			11.4		-
POTASSIUM			0.50	,	
CHLORIDE	23	25	16		21
SULFATE	10	10	8		9
TN : TP			30		14
CALCITE SATURATION INDEX			3.7		

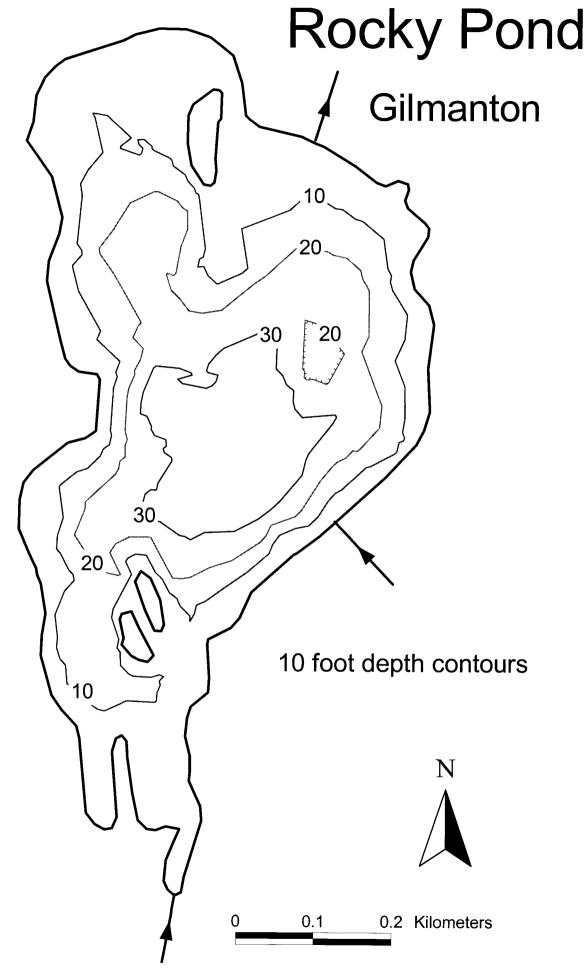
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2002

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
5	2	3	1	11	Meso.

COMMENTS:

- 1. Previously surveyed in 1982; no change in trophic class and little change in trophic parameters between the two years.
- 2. Lab accident made chlorophyll value suspect and is not reported. For purposes of classification, a chlorophyll value of 4 to 8 was estimated, based on comparing trophic data between the two years, which resulted in the mesotrophic classification.
- 3. Rough launch site with little parking. Launch area was not marked it was off a small dirt road at the southern end of the pond.
- 4. Slightly elevated sodium, chloride and conductivity values suggest some road salt runoff to the pond.



FIELD DATA SHEET

LAKE: ROCKY POND TOWN: GILMANTON

WEATHER: Partly sunny & breezy DATE: 06/27/2002

DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	24.5	9.1	108 %
1.0	23.3	9.1	106 %
2.0	20.4	9.4	102 %
3.0	17.4	9.3	96 %
4.0	12.4	9.0	84 %
5.0	10.9	7.5	66 %
6.0	9.6	6.1	53 %
7.0	8.7	4.3	36 %
8.0	8.2	2.8	23 %
9.0	8.0	2.3	19 %
10.0	8.0	0.6	5 %
11.0	8.1	0.0	0 %

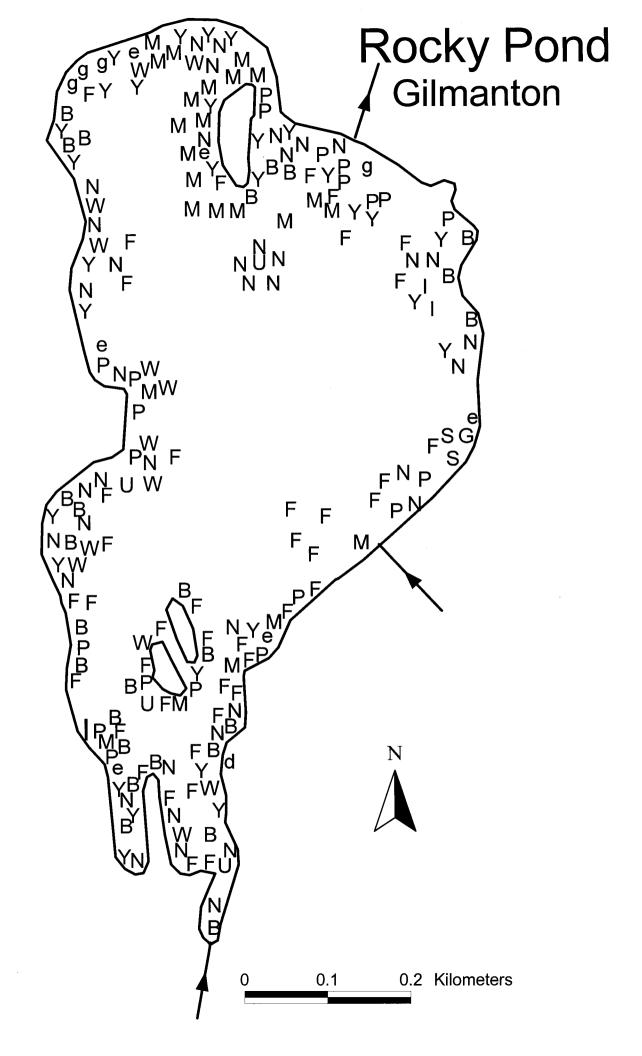
SECCHI DISK (m): 3.8

COMMENTS:

BOTTOM DEPTH (m): 11.4

TIME: 1150

*Dissolved oxygen values are in mg/L



AQUATIC PLANT SURVEY

LAK	E: ROCKY POND	TOWN: GILMANTON	DATE: 06/27/2002		
PLANT NAME ABUNDA					
Key	GENERIC	COMMON	ABONDANCE		
Y	Nuphar	Yellow water lily	Scat/Common		
В	Brasenia schreberi	Water shield	Scat/Common		
F	Nymphoides cordatum	Floating heart	Scat/Common		
I	Iris versicolor	Blue flag	Sparse		
P	Pontederia cordata	Pickerelweed	Scat/Common		
d	Dulichium arundinaceum	Three-way sedge	Scattered		
е	Eleocharis	Spike rush	Sparse		
M	Myriophyllum heterophyllum	Water milfoil	Common		
N	Nymphaea	White water lily	Scattered		
W	Potamogeton	Pondweed	Scattered		
บ	Utricularia	Bladderwort	Scattered		
G	Gramineae	Grass family	Sparse		
S	Sparganium	Bur reed	Sparse		
T	Typha	Cattail	Sparse		
D	Decodon verticillatus	Swamp loosestrife	Sparse		
7					

OVERALL ABUNDANCE: Common

GENERAL OBSERVATIONS:

- 1. The exotic species of water milfoil was present. The pond was treated with the herbicide diquat in 2001 to temporarily help control the milfoil growth.
- 2. Milfoil was locally abundant in the northern end, particularly around the backside (NW) of the island.
- 3. Overcast at times and difficult to see into the water may have missed smaller patches of the submerged milfoil.